

AMENDMENTS TO THE CLAIMS

1. – 52. (Cancelled).

53. (Currently Amended) An apparatus for aspect controlled selective etching comprising:

a plasma etching chamber including a supported electrode;

a plasma induced bias voltage on said electrode; and

a bias voltage modulator for modulating ~~[[the]]~~ a DC bias voltage between a first voltage and a second voltage, wherein at said first voltage material is deposited onto a first location while a second location is etched, is greater than the voltage at which no etching occurs and at said second voltage both first and second locations are etched less than the voltage at which no etching occurs.

54. (Original) The apparatus according to claim 53, wherein said apparatus is a high voltage plasma apparatus.

55. (Original) The apparatus according to claim 53, wherein said high power plasma apparatus has a source power of from about 400 to about 1500 watts.

56. (Original) The apparatus according to claim 54, wherein said apparatus is an inductively coupled plasma apparatus.

57. (Original) The apparatus according to claim 54, wherein said apparatus is an electron cyclotron resonance apparatus.

58. (Original) The apparatus according to claim 53, wherein said apparatus operates at a pressure of from about 2 to about 40 mTorr.

59. (Original) The apparatus according to claim 53, wherein said bias voltage modulator has a duty cycle of from about 10% to about 90%.

60. (Original) The apparatus according to claim 53, wherein said bias voltage is varied from between about 0 volts and about 300 volts.

61. (Original) The apparatus according to claim 53, wherein said plasma is a fluorocarbon gas provided to said reactive plasma chamber by a plasma source.

62. (Original) The apparatus according to claim 53, wherein said bias voltage modulator modulates the source power.

63. (Original) The apparatus according to claim 53, wherein said bias voltage modulator modulates the bias power.

64. – 74. (Cancelled).

75. (New) An apparatus for selective etching of a substrate, comprising:

an etching chamber having an electrode; and

a bias voltage modulator for modulating a DC bias voltage between a first voltage and a second voltage while processing a substrate having an opening, wherein said modulator is adapted to modulate voltage such that material is deposited at a first position of said opening which has a

first aspect ratio, while a second position of said opening having a second aspect ratio, different from said first aspect ratio, is etched.

76. (New) The apparatus of claim 75, wherein said first aspect ratio is less than said second aspect ratio.

77. (New) The apparatus of claim 75, wherein said first aspect ratio is less than or equal to 5.

78. (New) The apparatus of claim 75, wherein said first aspect ratio is from about 0.5 to about 5.

79. (New) The apparatus of claim 75, wherein said second aspect ratio is greater than or equal to 3.

80. (New) The apparatus of claim 75, wherein said second aspect ratio is from about 3 to about 20.

81. (New) An apparatus for selective etching of a substrate, comprising:

an etching chamber having an electrode; and

a bias voltage modulator for modulating a DC bias voltage between a first voltage and a second voltage while etching a self-aligned contact opening, wherein said voltage modulator is adapted to control deposition of material at a first position of said opening which has a first aspect ratio, while etching a second position of said opening which has a second aspect ratio.

82. (New) The apparatus of claim 81, wherein said first aspect ratio is less than said second aspect ratio.

83. (New) The apparatus of claim 81, wherein said first aspect ratio is less than or equal to 5.

84. (New) The apparatus of claim 81, wherein said first aspect ratio is from about 0.5 to about 5.

85. (New) The apparatus of claim 81, wherein said second aspect ratio is greater than or equal to 3.

86. (New) The apparatus of claim 81, wherein said second aspect ratio is from about 3 to about 20.